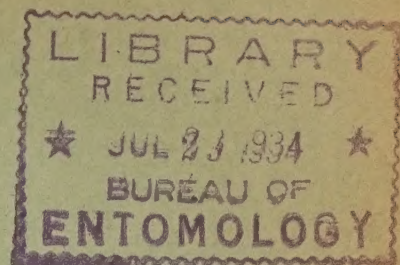


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UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF CHEMISTRY AND SOILS
INSECTICIDE DIVISION

Patent List No. 2



A LIST OF
UNITED STATES PATENTS
Issued from 1917 to 1933 inclusive
Relating to
INSECT TRAPS USING ARTIFICIAL LIGHT
Compiled by
R. C. Roark

Washington, D. C.
July 1934

A LIST OF UNITED STATES PATENTS ISSUED FROM 1917 TO 1933, INCLUSIVE,
RELATING TO INSECT TRAPS USING ARTIFICIAL LIGHT

Compiled by
R. C. Roark,

Insecticide Division, Bureau of Chemistry and Soils.

Of the 52 patents listed here about one-half specify an electric light for attracting insects, and the others describe kerosene lamps, gasoline torches, acetylene lights or light from gas or alcohol. In two devices the light is transmitted through colored glass to attract insects. Light rich in ultraviolet rays is used in two devices also.

Insects attracted by light are sucked in by an electric fan in some devices while in other devices they are blown in.

In these devices the insects are killed by heat, by falling into an insecticidal liquid such as a film of kerosene or oil on water, by being caught on sticky fly-paper or by coming into contact with the arms of a rotating striker. In one device the flies are carried by a moving member into a trapping receptacle.

Several devices use bait in the daytime and light at night. One patent describes the use of different baits according to the kind of insect it is desired to attract. In the words of the patent, "the bait used is determined by the particular insect that is desired to be caught. The codling moth bait is the smell of the flower and the fruit of the perfect apple as near as can be found. The bait for the alfalfa weevil is the extract in fluid form from alfalfa. The bait for the cherry aphid is the extract from the perfect cherry, and other baits may be made as near from perfect fruit as can be had. Insects such as gnats and mosquitoes will be attracted by the light and other forms of bait as desired." Three of the traps are specifically designed for use in fruit orchards and eight are stated to be useful in entrapping the boll weevil.

Roaches are tempted by bait to enter one device and after entering it are driven by an intermittently acting electric light into a trapping compartment.

In addition to the traps described here those persons interested in light traps are referred to Patent List No. 1 issued by the Insecticide Division, which lists 20 electrocuting devices that use artificial light to lure insects to them.

Every effort has been made by the compiler to make this list of patents complete and no discrimination is intended against any patent mention of which is inadvertently omitted.

The Department of Agriculture assumes no responsibility for the merits or workableness of any of the patents, nor does it recommend any of the inventions listed.

1,225,556 (May 8, 1917; appl. Apr. 26, 1916). FLY-CATCHER. James Allen, Washington, D.C. - Flies are attracted to this trap by bait and on attempting to fly outward through the top or sides of the box, being attracted by the light passing through perforations, they are caught on an adhesive coating. This device in conical form may be suspended from an electrolier.

1,231,877 (July 3, 1917; appl. Feb. 14, 1917). INSECT-TRAP. John T. Goodrum, Jr., Vienna, Ga. - Insects, especially boll weevils, are attracted to this device by a light, such as that from a kerosene lamp, and fall into a pan containing a suitable insecticidal liquid.

1,258,504 (Mar. 5, 1918; appl. June 11, 1917). INSECT-CATCHER. George R. Van Orden, Morton, N.Y. - One-half to Frank Keiper, Rochester, N.Y. This device consists of a lantern and sheets of sticky fly paper arranged in a vertical position radially about it. It is intended to be suspended from the limb of a fruit tree.

1,263,562 (Apr. 23, 1918; appl. June 14, 1917). INSECT-CATCHER. Frank Keiper, Rochester, N.Y., - One-half to George R. Van Orden, Morton, N.Y. This device consists of a lantern (or candle or electric light) with sheets of sticky fly paper radially attached in a vertical position. For use it is hung from a limb of a fruit tree. (Compare United States Patent 1,258,504).

1,268,127 (June 4, 1918; appl. June 14, 1917). INSECT-CATCHER. Frank Keiper, Rochester, N.Y., - One-half to George R. Van Orden, Morton, N.Y. - This device consists of a lantern (or candle or electric light) to which sheets of sticky fly paper are radially attached by means of a special frame. For use the device is hung from a limb of a fruit tree. [Compare United States Patents 1,258,504 and 1,263,562].

1,280-359 (Oct. 1, 1918; Dec. 1, 1911). DEVICE FOR REMOVING INJURIOUS INSECTS. Eugen Abresch, Neustadt-on-the-Hardt, Germany. - Insects are attracted by ultraviolet rays from a mercury vapor lamp and are sucked or blown by an artificial draft into a collecting chamber.

1,294,036 (Feb. 11, 1919; Apr. 18, 1918). INSECT EXTERMINATOR. John H. Brackin, Hockessin, Dela. - Night flying insects in a garden or orchard are attracted by light from an oil burning lamp or from an electric lamp, strike against reflector plates and drop into a pan of crude oil.

1,304,397 (May 20, 1919; appl. Jan. 16, 1919). INSECT-TRAP Herndon G. Snead, Birmingham, Ala. - Insects attracted to an acetylene light provided with a reflector are destroyed by the heat and fall through a metal funnel into a glass jar.

1,314,367 (Aug. 26, 1919; appl. Nov. 27, 1918). INSECT DESTROYER. John Schuler, Cleveland, Ohio. - Boll Weevils are attracted by a flame from a ball of asbestos soaked in kerosene which is supported on a pan, and are killed by the heat.

1,322,969 (Nov. 25, 1919; Sept. 3, 1919). LAMP. Moses R. Smith, Madisonville, Ky. - Flying insects especially those that attack tobacco and cabbage are attracted by light from a burning candle or lamp and are trapped.

1,368,767 (Feb. 15, 1921; appl. April 12, 1919). INSECT - TRAP. Ida Smedberg, Chisago City, Minn. - Insects such as flies, moths and mosquitoes are attracted to this trap by means of a kerosene lamp provided with a reflector and are destroyed by heat.

1,375,016 (Apr. 19, 1921; appl. Sept. 27, 1920). INSECT ATTRACTING AND EXTERMINATING DEVICE. Howard F. Rhoads, Winston-Salem, N. C., - One-third to John A. Powell, Middletown, Ohio, - Flying insects of all kinds are attracted by light from a gasoline lantern provided with reflectors and after striking against the reflectors are precipitated into a pan containing an insecticidal liquid such as coal oil.

1,380,585 (June 7, 1921; appl. Dec. 7, 1920). INSECT-TRAP. Eugene F. Parks, Winston-Salem, N.C. - Insects, especially the tobacco moth, are attracted by light from a lantern or an electric lamp, are stunned by impact and fall into a trap.

1,397,218 (Nov. 15, 1921; appl. Feb. 26, 1921). INSECT-EXTERMINATOR. William F. Lackie, Opportunity, Wash. - Moths and other insects in apple orchards are attracted by light from this gasoline torch and are incinerated.

1,437,251 (Nov. 28, 1922; appl. Feb. 14, 1922). INSECT-TRAP. Silas Kesling, Peru, Ind. Insects are attracted to this trap during the day time by means of molasses or other sweet material, and are attracted to the trap in the night by means of a light from a burner. The insects are scorched by the flame and drop into a receptacle containing liquid.

1,445,906 (Feb. 20, 1923; July 10, 1922). INSECT TRAP. John J. Noonan, Obion, Tenn. - Insects attracted by an electric light to this device are blown by an electric fan into a cage containing a pan of water, oil or poisoning liquid.

1,461,169 (July 10, 1923; appl. Aug. 11, 1922). INSECT CATCHER. Walter C. Wilson, Montello, Nev. - Flies and other insects are attracted by an electric light and become attached to sticky paper positioned back of the light.

1,482,420 (Feb. 5, 1924; appl. Oct. 31, 1922). BOLL WEEVIL TRAP. Arthur Wilson, Glendora, Miss. - Boll Weevils and moths are attracted by a strong glaring light from burning gas, oil, acetylene, alcohol or other fuel, are singed and fall into a trap.

1,484,703 (Feb. 26, 1924; appl. Sept. 1, 1923). BUG DESTROYER. Joseph B. Eshman and William G. Johnson, Eureka Springs, Ark. - Boll weevil and other insects are attracted by light from a lamp and fall into a pan holding a poisonous substance.

1,488,178 (Mar. 25, 1924; appl. Feb. 21, 1923). INSECT TRAP. James R. Thomas and James L. Floyd, Kenton, Tenn. - In this trap an electric light is used to attract insects, such as tobacco, cabbage, tomato, corn and orchard flies, and the Hessian fly, and a fan driven by an electric motor creates a down draft for forcing the insects within a collecting receptacle.

1,495,089 (May 20, 1924; appl. Feb. 4, 1922). INSECT CATCHER. Edgar B. Lewis and Clarence S. Chandler, Greenville, S. C. - Boll weevils and other insects are attracted by a light from a kerosene lamp in a transparent housing, are stunned by violent contact with the housing and fall through a funnel into a casing, in which an insect-destroying agent may be placed.

1,504,579 (Aug. 12, 1924; appl. April 27, 1923). APPARATUS FOR DESTROYING INSECTS. Charlie A. Rounsaville, Scottsboro, Ala. - Insects, such as boll weevils, bean beetles, mosquitoes, gnats, etc., are attracted by a brilliant flame and incinerated. A reservoir containing fuel oil is provided so that after being set in operation the apparatus requires little or no attention.

1,505,651 (Aug. 19, 1924; appl. Dec. 10, 1923). INSECT TRAP. Fred Loesch, Estherville, Iowa. - Flies and other insects are attracted to this cylindrical wire screen trap by means of a kerosene lamp provided with a reflecting plate.

1,509,116 (Sept. 23, 1924; appl. Sept. 19, 1923). INSECT DESTROYER. James R. Thomas and James L. Floyd, Kenton, Tenn. - Boll Weevils, moths, beetles and flies are attracted by light from a gas or oil burner and are destroyed by heat.

1,521,323 (Dec. 30, 1924; appl. April 10, 1922). INSECT TRAP. John W. Reeder, Spokane, Wash. - This device, which is particularly adapted for use in orchards, consists of a powerful electric lamp of incandescent type placed over a pan containing oil and water. Insects are attracted by the light, and scorched, fall into the oil film, and are destroyed.

1,527,976 (Mar. 3, 1925; appl. April 25, 1924). INSECT DESTROYER. John G. Haugart, St. Louis, Mo. - Insects are attracted by an electric light and are destroyed on coming into contact with a resistance wire heated electrically to about 400°F.

1,552,649 (Sept. 8, 1925; Aug. 22, 1922). PROTECTION OF SEEDS AND CROPS FROM THE ATTACKS OF INSECTS AND BIRDS. Jacob S. Ross. Putney, Eng. - Cotton plants are protected against boll weevils by a traveling cage suspended from a wire track. Insects are attracted to the cage by bait or by a light and are caught by an adhesive, poisoned or precipitated into a pan of water. Brushes on the cage are designed to disturb the insects on the plants as the cage travels over them and to cause the insects to rise. Birds are frightened away by intermittently detonating devices.

1,562,586 (Nov. 24, 1925; appl. Mar. 21, 1925). INSECT DESTROYER. William H. Pool, Salt Lake City, Utah. - Night flying insects such as moths and mosquitoes are attracted to this device by an electric light provided with a reflector and fall into a liquid in a receptacle. Liquid bait on cotton waste or a sponge is used during the day. "The bait used is determined by the particular insect that is desired to be caught. The codling moth bait is the smell of the flower and the fruit of the perfect apple as near as can be found. The bait for the alfalfa weevil is the extract in fluid form from alfalfa. The bait for the cherry aphid is the extract from the perfect cherry, and other baits may be made as near from perfect fruit as can be had. Insects such as gnats and mosquitoes will be attracted by the light and other forms of bait as desired."

1,564,976 (Dec. 8, 1925; appl. Oct. 29, 1921). VERMIN TRAP. Louis A. Sauer, Willows, Calif. - Insects, especially those that fly or jump are attracted by a light (electric, gas, acetylene, kerosene or gasoline) and destroyed by heat.

1,566,619 (Dec. 22, 1925; appl. July 28, 1925). FLYTRAP. Hugo G. A. Schlossareck, Yonkers, N.Y. - Flies and other winged insects are attracted by an electric light to this colored transparent globe and fall in to salt water.

1,601,552 (Sept. 28, 1926; appl. Feb. 2, 1926). INSECT TRAP. William H. Bell, Alachua, Fla. - Insects are attracted by a light from an electric lamp or any lamp or lantern and fall into a pan containing oil floating on water.

1,633,753 (June 28, 1927; appl. Sept. 29, 1926). INSECT - DESTROYING DEVICE. Matt Ray, Arkadelphia, Ark. - Boll Weevils and other insects are attracted to a lighted lamp or an electric light and fall into a pan of kerosene and water under the lamp.

1,658,589 (Feb. 7, 1928; appl. April 11, 1927). MOTH TRAP. James E. Brady, South Milford, Ind. - Night flying insects are attracted by a torch provided with a reflector and fall into a pan containing water covered with a layer of crude oil or coal oil.

1,666,509 (April 17, 1928; June 28, 1926) FLYTRAP. Hugo G. A. Schlossareck, Yonkers, N.Y. - This device is an improvement over the one described in United States Patent 1,566,619 issued December 22, 1925 to H.G. A. Schlossareck. Flies are attracted to this colored glass trap by an electric light and fall into salt water.

1,667,876 (May 1, 1928; appl. Dec. 2, 1925). INSECT TRAP. Martin Steiner, Kenilworth, N.J. - Insects are attracted to this trap by food or light from a kerosene or electric light, where they may be killed by heat or by fumes of p-dichlorobenzene or by falling into liquid poison held in a pan or onto sticky fly paper or adhesive gum.

1,671,404 (May 29, 1928; appl. Aug. 4, 1927). MOSQUITO AND INSECT TRAP. George C. Cherry, Dallas, Texas. - Bait is used to attract flies or an electric light is used to attract mosquitoes, candle bugs and other insects to this trap into which they are drawn by suction from an electric fan.

1,681,625 (Aug. 21, 1928; appl. May 18, 1926). INSECT TRAP. William O. Roberts, Houston, Texas, and Robert J. Keays, San Francisco, Calif. Roaches are attracted by bait and are then frightened into a trapping chamber by an intermittently acting electric light.

1,693,368 (Nov. 27, 1928; appl. Nov. 4, 1927). MOSQUITO AND INSECT TRAP. George C. Cherry, Dallas, Texas, - Effie May Cherry, Dallas, Texas. - Edible bait is used to attract flies on an electric light is used to attract mosquitoes, candle bugs and the like to this device into which they are drawn by suction from an electric fan.

1,701,674 (Feb. 12, 1929; appl. Dec. 22, 1926). AUTOMATIC INSECT TRAP USING LAMPS. Siio Hitosi, Nagoya, Japan. - Insects are attracted by a light positioned with a transparent revolving cylinder and alighting on the surface thereof are carried into a trapping receptacle.

1,713,557 (May 21, 1929; appl. Nov. 28, 1925). VERMIN TRAP. Louis A. Sauer, Willows, Calif. - This device is an improvement over the one described in United States Patent 1,564,976 issued December 8, 1925, to L. A. Sauer. Insects are attracted by an electric light and are destroyed by heat from the light.

1,721,872 (July 23, 1929; appl. May 3, 1928). INSECT DESTROYER. William T. Patterson, Sarcoxie, Mo. - Insects are attracted to the flame from this oil burner of wick type and are precipitated into a pan of water. This device is intended for use against moths injurious to fruits and berries.

1,723,919 (Aug. 6, 1929; appl. April 13, 1928). INSECT TRAP. John Bykowsky, West Warwick, R. I. - This device consists of a pair of spaced conical shaped plates smeared with a sticky substance on their inner sides. A light should be arranged between the apexes of the plates for attracting the insects. The device is intended for exterminating corn borers, caterpillars and other insects which damage fruit trees and vegetable gardens. It particularly serves to catch the moths which produce these pests.

1,749,717 (Mar. 4, 1930; appl. Jan. 17, 1929). FLYTRAP. George Palmos, Sacramento, Calif. - Flies are attracted by electric light to this box-type trap positioned in a window and are killed by a vermin destroying solution.

1,751,130 (Mar. 18, 1930; appl. Aug. 25, 1928). INSECT TRAP. William F. Cornelius and Henry Jacobs, Birmingham, Ala. - Insects are attracted to an electric light, strike a baffle and fall into a circular trough containing a suitable mixture for killing the insects.

1,770,626 (July 15, 1930; appl. Aug. 18, 1928). MOTH CATCHER. William L. Richards, Bellingham, Wash. - Moths in an orchard are attracted by an electric light provided with reflectors and are sucked by an electric fan into this trap where they fall into water or other liquid lethal to insects.

1,770,737 (July 15, 1930; appl. Aug. 20, 1929). INSECT TRAP. William R. Gwathmey, Ruark, Va. - Insects are attracted by the light from a lantern or electric lamp provided with reflectors and fall into a pan containing water covered with oil.

1,805,581 (May 19, 1931; appl. July 11, 1928). INSECT DESTROYER. William W. Hess, Robinson, Ill. - Insects attracted to an electric light are blown by an electric fan into a pan containing water covered by a film of kerosene.

1,813,648 (July 7, 1931; appl. Sept. 9, 1930). INSECT EXTERMINATOR. Ralph Watson, Villa Ridge, Ill. - This insect exterminating device of the lantern type aims to kill any attracted insects either by burning (if they ascend) or by drowning (if they descend).

1,816,396 (July 28, 1931; appl. Nov. 19, 1928; in the Netherlands, Nov. 29, 1927). COMBINED INSECT CATCHING LAMP AND KILLING DEVICE. Emil Oppenländer, Waiblingen, Stuttgart, Germany. - Insects are attracted by a light to this device where they are killed by a rotating multi-armed striker.

1,819,551 (Aug. 18, 1931; appl. Dec. 27, 1929; in Belgium, Jan. 9, 1929). METHOD AND APPARATUS FOR CAPTURING INSECTS. Georges Gourdon, Montmorency, France. Insects are attracted by intermittent beams of scintillating light rich in ultraviolet rays to this device and are sucked by an electric fan into a trapping chamber.

1,820,813 (Aug. 25, 1931; appl. Dec. 4, 1929). DEVICE FOR TRAPPING AND EXTERMINATING INSECTS. Frederick W. Loomis, Chestnut Hill, Conn. - Insects are attracted to an electric light positioned over a pan of exterminating liquid. Bait may also be used. Insects in close proximity to the pan may be drawn into it by suction through a tube.

1,833,699 (Nov. 24, 1931; appl. Mar. 16, 1929). INSECT TRAP. Frederick H. Wolf, Melcher, Iowa. - Insects attracted by an electric light to this device fall through a funnel into a receptacle containing an insecticide.

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